

An Examination of the Influence of Related Party Transactions on Corporate Performance: Empirical Findings from the NSE 500 Index (2012-2020)

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Abstract

This study examines the NSE 500 Index in India from 2012 to 2020 and finds that the Total Income from Related Party Transactions (RPTs) has a significant negative effect on business performance. Furthermore, company performance was not significantly affected by the total expenses and total income from RPTs. Furthermore, this study investigated the moderating impacts of Total Assets on the influence of RPTs on firm performance. This study is one of the early investigations of the characteristics of RPTs and their influence on business performance.

Keywords:

Corporate governance, Related Party Transactions, RPTs, company performance, Tobin's Q.

Introduction

Related Party Transactions encompass a broad spectrum of activities that influence corporate governance and business performance (BP). Over the past two decades, several major instances of corporate fraud, such as Satyam, Enron, Adelphia, and WorldCom, have been linked to the improper use of RPTs (Al-Dhamari et. al., 2018; Khanna, 2015). The topic of RPTs has long been a subject of debate, primarily because of its inherent character, in which the most important factors are the clarity and subjectivity of the transaction. The clarity of

disclosing the nature of related party transactions, such as sales, expenses, cash flows, borrowing, lending, and guarantees, varies across countries and legal contexts, leading to subjectivity. According to the International Accounting Standards, Related Party Transactions (RPTs) are defined as the transfer of resources between parties that have a relationship regardless of whether a price is involved. A related party can be either an individual or an organization connected to the entity responsible for generating financial statements (Rahmat et. al., 2020). The World Bank's influential Doing Business Report (DBR) is a reaction to global standards for effective corporate governance. It encourages governments to adopt these norms by ranking them annually based on their compliance with these criteria. DBR has developed an RPT Index called the "Extent of Conflict-of-Interest Regulation Index." This index primarily relies on the principles of disclosure and approval requirements (Puchniak & Varottil, 2020).

The Doing Business Database consists of rankings determined by calculating the average ease of doing business for each economy across ten different criteria included in the overall rating. New Zealand holds the highest rank in the Doing Business Database Ranking, with a DB Score of 86.8. Singapore, with a DB Score of 86.2, occupies the second position. China (Hong Kong SAR) is ranked third with a DB Score of 85.3, whereas the United States is ranked sixth with a DB Score of 84.0. India is ranked 63rd, with a DB Score of 71.0. The rankings are based on data collected until May 1, 2019, specifically referring to the Ease of Doing Business Ranking for the year 2020.

The Indian Accounting Association Standards (AS-18) define Related Party Transactions (RPTs) as situations in which one party has the authority to exert control or exert considerable influence over another party's financial and/or operational decisions during a specific reporting period. Furthermore, restrictions regarding Related Party Transactions (RPTs) are specified in the Companies Act, 2013 (Amendment in the Companies Act, 1956), Indian Accounting Standard 18, The Auditor's Report Order, and Clause 49 of the Listing Agreement. Furthermore, the Income Tax Act of 1961 addresses many matters concerning the transfer prices of transactions involving related parties. The criteria stipulated by these regulations can be categorized into four distinct groups based on the nature of their operations. These categories include the identification of related parties, related party transactions, approval processes, and disclosure criteria. Within this context, if an organization has a greater degree of control rights than cash flow rights and if the enforcement systems are not adequately robust, one can exploit related party transactions (RPTs) to their advantage.

Consecutively, this will result in a decline in the stock market prices of corporations and subsequently deteriorate firm performance. Furthermore, the presence of Information Asymmetry amplifies the potential for financial risk, which also applies to the characteristics of Related Party Transactions (RPTs). Therefore, the disclosure of Related Party Transactions (RPTs) lessens the imbalance of information in the market and consequently lowers the likelihood of a sudden decline in stock prices (Selarka & Choudhury, 2015). Consequently, our study categorizes Related Party Transactions based on the type of transactions between Promoters and the Corporate Bodies (Business Groups).

Our study enhances the current body of the literature in numerous ways. First, the categorization of RPTs into two overarching groups clearly defines the type of RPTs being examined and their influence on firm performance in the Indian context. To address the problems associated with Panel Data, we employed the Fixed Effects Model (FEM) estimation alongside the ordinary least squares (OLS) Regression Model to address the inherent endogeneity in the panel data. This enhances the reliability and precision of the findings of our investigation. Researchers have also investigated how the size of a company's total assets influences the relationship between related party transactions (RPTs) and AC components of the audit committee on the performance of the organization. The remaining portion of the study comprises a comprehensive literature review that examines the landscape of Randomized Controlled Trials (RCTs), both globally and specifically within the Indian context. This is followed by a detailed analysis of the data and research methodology. The data were subjected to further analysis and subse

quently reported as empirical results in the following section. The empirical results are analyzed and conclusions are derived from them in the end.

Literature Review

In emerging markets, such as India, the underdevelopment of human capital and financial markets contributes to a poor legal and regulatory environment. Furthermore, the growing impact of related party transactions (RPTs) in corporate groupings with concentrated ownership gives rise to the opportunistic manipulation of earnings, leading to fraudulent activities. Possible solutions to this problem include the increased involvement of foreign investors in monitoring managers and providing strategic guidance to top management as firms expand internationally. This can be achieved through shareholder activism, leveraging explicit knowledge and utilizing extensive networks. Ultimately, these actions contribute to the upward movement of stock prices for the companies involved (Agniho-tri & Bhattacharya, 2019). Additionally, Foreign Institutional Investors (FIIs), with their extensive knowledge of risk-return trade-offs in international cultural contexts, can provide guidance to family or business groups and improve company performance through the outflow of Foreign Direct Investment (FDI).

Nevertheless, research undertaken in the Indian context has revealed that Related Party Transactions (RPTs) have no substantial influence on firm performance. However, a robust association has been observed between proprietor ownership and the extent of RPTs. A study conducted in the Philippines found no association between discriminatory RPTs and firm performance (Manaligod & Rosario, 2012). Furthermore, organizations allocate the resources they acquire from their activities to their primary shareholders and affiliated entities, particularly in the case of companies owned by a larger group. This practice is commonly referred to as tunneling. In addition, research undertaken on S&P 1500 companies in 2001, 2004, and 2007 has also identified RPTs as "red flags" that indicate possible financial misrepresentation (Kohlbeck & Mayhew, 2017). In China, the market perceives party transactions as a form of tunneling, as indicated by the market's discounting of the share prices of firms based on Tobin's Q and Market-to-book Equity findings (Jian & Wong, 2010). Similarly, in order to comply with the regulations set by the Chinese Securities Exchange Commission (CSRC), the business group will usually choose one of its most robust companies and separate the underperforming assets from this company. As the company becomes publicly traded, it continues to conduct business with other affiliated companies before reporting any transactions with connected parties, as required by regulations (Fisman & Wang, 2010). Hence, propping and tunneling occur simultaneously based on the firm's needs in relation to RPTs and how they might be employed and adjusted.

In contrast to the aforementioned circumstances, several global studies continue to demonstrate the favorable influence of RPTs on company performance across various countries. The disclosure standards of related party transactions (RPTs) also influence supply chains, with the goal of achieving operational efficiency, strategic benefits, and ultimately producing financial gains. An investigation conducted in Indonesia examined the relationship between RPTs disclosure and supply chain management, and their impact on company performance. The study found that both RPTs disclosure and supply chain management have a favorable influence on firm performance (Firmansyah & Ardi, 2020). Moreover, recent reforms and rules regarding related party transactions (RPTs) in China have been successful in mitigating the potential abuse of RPTs to manipulate earnings (Ge et. al., 2010). Rahmat et al. (2020) find that RPTs have a favorable effect on company performance in Thailand and Malaysia, which can be attributed to weaker investor protection in these economies. Nevertheless, this study reveals contrasting outcomes regarding the impact of RPTs on Singapore and Hong Kong. This discrepancy might be attributed to the atypical characteristics of RPTs. Overall, RPTs are found to have a detrimental association with business performance despite the fact that these nations are known for their strong investor protection measures. Several studies have also found that the overall effect of related party transactions (RPTs) on firm performance is not significant. However, it is specifically the RPTs that occur before a counterparty becomes related and have a

positive and significant impact on firm performance, as measured by Tobin's Q. On the other hand, RPTs that are initiated after a counterparty becomes related have a negative and significant impact on firm performance (Ryngaert & Thomas, 2011). Several studies conducted in Malaysia indicate that RPTs have a negative impact on shareholders and lead to a decrease in performance, contradicting earlier research findings (Wahab et. al., 2011). Nevertheless, the adverse effects on RPTs can be mitigated by the implementation of corporate governance strategies, such as enhancing board independence and adjusting executive salaries. Additionally, auditor size might serve as an external governance factor to mitigate the adverse effects of related party transactions (RPTs). Furthermore, the Organization for Economic Co-operation and Development (OECD) classifies these related party transactions (RPTs) as abusive. They pointed out that these transactions incur high costs and result in a loss of business opportunities for the listed entity. Additionally, the OECD has highlighted that engaging in RPTs exposes the listed entity to risks (OECD, 2009; Wahab et. al., 2011). Furthermore, researchers have developed measures that encompass multiple dimensions, such as asset specificity, management problems, investment, and governance mechanisms, to assess the operation techniques of Information Systems (IS) (Aubert et. al., 1996).

Previous research has shown that related party transactions (RPTs) can either harm shareholders or serve as advantageous strategic economic choices made by corporations (Gordon et. al., 2004, 2004b; Wahab et. al., 2011). Nevertheless, some research has contended that engaging in related party transactions (RPTs) may provide greater effectiveness and cost efficiency than engaging in similar transactions with unrelated parties (Ryngaert & Thomas, 2007; Wahab et. al., 2011). The benefits of relational procurement transactions (RPTs) include improved coordination among activities and feedback between contracting parties, increased contract efficiency due to familiarity between related parties, reduced hold-up problems in the contracting process, and the facilitation of investments in firm-specific connections. Therefore, these transactions do not negatively affect shareholders' interests because the amount received from related party transactions (RPTs) is insignificant and inconsequential to shareholders. However, it is important to note that even small amounts can still pose a risk to the company, attract negative publicity, and potentially harm the company's stock price, as demonstrated in the case of Tai Kwong of Yokohama Berhad in Malaysia on March 5, 2009. Additionally, the implementation of a governance index in corporate governance leads to improved business performance, as demonstrated by research conducted by Wahab et. al. in 2007 and 2011.

Corporate governance encompasses two distinct categories of governance factors, internal and external. The assessment of internal governance includes CEO duality, board size, board independence, and executive compensation. External governance is evaluated based on the total shareholdings by institutional investors and the size of the auditor, as shown by the presence of the BIG Four auditors (Fan & Wong, 2005; Wahab et. al., 2011). These findings indicate that corporate governance has a beneficial moderating impact on party transactions. They show that the existence of related party transactions might facilitate the transfer of conflicts of interest between managers and shareholders into efficient transactions (Chien & Hsu, 2010; Wahab et. al., 2011). By assigning different individuals to the positions of the CEO and the chairperson of the board, the board can independently oversee and manage the CEO. This separation of duties allows for effective monitoring and control (Jensen, 1993; Wahab et. al., 2011). As the level of independence among directors improves, the negative correlation between related party transactions (RPT) and business performance (measured by return on assets, ROA) weakens. This link has been demonstrated in studies conducted by Westphal and Zajac (1994), Conyon et al. (1995), and Wahab et al. (2011). Moreover, when considering the size of the board, it becomes apparent that larger boards lead to reduced control capabilities, while smaller boards are more likely to enhance firm performance because of the ease of monitoring directors and their respective roles (Jensen, 1993; Yermack, 1996; Haniffa & Hudaib, 2006; Wahab et. al., 2011; Naim & Aziz, 2022). In addition, the riots between Malays and Chinese in Malaysia in 1969 compelled the government to implement a New Economic Policy (NEP). As a result, foreign equity participation was restructured, with an increase in equity from 0 to 30 percent. Equity for Chinese and Indian individuals remained at 40

percent (Norhashim & Aziz, 2005; Wahab et. al., 2011). Given conflicting opinions regarding the connection between related party transactions (RPTs) and company performance, we conducted a study to examine the influence of RPTs on firm performance in the Indian context.

Initially, we analyzed the influence of the overall volume of transactions involving related parties on firm performance, as assessed by Tobin's Q. The aggregate sum of transactions involving related parties is then categorized into the total revenue generated from these transactions and the total expenses incurred. Furthermore, the influence of these transactions on company performance was analyzed. Therefore, our initial three assumptions were as follows:

H₀₁: There is no significant impact of the Total amount from RPTs on the firm performance.

H₀₂: There is no significant impact of the Total expenses from RPTs on the firm performance.

H₀₃: There is no significant impact of the Total income from RPTs on the firm performance.

In addition, Rasheed et al. al. (2021), when the RPTs (Related Party Transactions) improve transaction efficiency, it also results in a rise in audit fees due to the growing conflict of interests between controlling and minority shareholders. Furthermore, the internal audit function is impeded as a result of the increase in audit fees, which includes the enlargement of the audit committee and the frequency of audit committee meetings (Al-Dhamari et. al., 2018). Hence, our subsequent research focuses on evaluating the influence of factors such as the size of the audit committee, the frequency of audit committee meetings, audit fees, and the total number of related party transactions relative to total assets on company performance (Wahab et. al., 2011). The entire amount obtained from RPTs is divided into two components: the total income from RPTs and the total expenses from RPTs, which are adjusted based on total sales. These components were used for the subsequent analysis. The subsequent phase of the research focuses on audit fees, specifically, the breakdown of auditor fees and non-audit fees. This study investigates the influence of these fees on firm performance, considering the controlling variables. Furthermore, the researchers investigated how the size of a company's total assets influences the relationship between related party transactions (RPTs) and firm performance. Nodeh et al. (2016) and Wahab et al. (2011) conducted this analysis.

Experimental Procedures

This study utilized the NSE 500 Index from the National Stock Exchange (NSE) in India. The sample selected for the study is based on the highest percentage of market capitalization, which is freely available for trading (96.1% as of March 29, 2019). Therefore, the sample selection for the study is based on its size, which is evaluated by market capitalization. Among the 500 firms registered on the stock exchange, 152 have been categorized separately because they are either owned by the Central or State government, or they belong to the financial sector, such as banking or financial services (Halder & Rao, 2011). This differentiation arises because of the inherent disparities in the governing structures of public entities, such as Central and State corporations and the financial sector, compared to private companies. Distinct social and legal norms impose obligations on the aforementioned public entities. The study includes the remaining 348 companies, which consist of private sector entities and are further categorized into the manufacturing and services sectors. Among the 348 enterprises, 254 firms are classified under the manufacturing sector, whereas the remaining 94 firms fall under the service sector. This study includes the factors listed in Table 1. The data for the mentioned variables are sourced from the Prowess IQ Database, which is provided by the Center for Monitoring Indian Economy (CMIE). Table 1 presents a description of the variables and formulas employed for their calculation. A panel dataset was compiled for the NSE 500 Index sample spanning from 2012 to 2020. It includes all factors related to corporate governance and company performance for

the data of 348 companies annually. The analysis was conducted using EViews 11 Student Version software, and the data were winsorized at the 1% and 99% levels, respectively.

Table 1: Correlations matrix

S.R. No.	Variable	Description
1	ACS	Audit Committee Size
2	ATS	(Advertising Expenditure/Total Sales) *100
3	LOGAUDITFEES	Log of Audit Fees
4	LOGAUDITORFEES	Log of Auditor Fees
5	LOGNONAUDITFEES	Log of Non-Audit Fees
6	LOGOA	Log of Organizational Age
7	LOGMC	Log of Market Capitalization
8	NACM	Number of Audit Committee Meetings
9	TARPT	Total Amount from Related Party Transactions
10	TERPT	Total Expenses from Related Party Transactions
11	TIRPT	Total Income from Related Party Transactions
12	TOBIN'S Q	Tobin's Q = $\frac{\text{Equity Market Value (Market Cap)}}{\text{Book Value of Equity (Book value per share * No. of outstanding shares)}} * 100$

Materials and Methods

The sample used for the research is NSE 500 Index of the National Stock Exchange (NSE), India. The sample chosen for the study is because of the maximum free float market capitalization of 96.1% as on 29th March, 2019. Hence, the sample chosen for the study is determined on the basis of size measured by market capitalization. Out of the 500 companies listed on the stock exchange 152 companies have been segregated due to the nature of ownership of the companies as they are Central or State government companies or belongs to financial sector (banking or financial services) (Halder & Rao, 2011).

This is done solely because the nature of governing mechanism of the Central and State companies and financial sector is different from the private companies and moreover separate social and legal regulations oblige the former companies. The remaining 348 companies are taken into study comprising of private sector and are differentiated into manufacturing and services sector. Out of 348 firms, 254 firms are of manufacturing sector and 94 belong to services sector. The variables taken for the study are shown in Table 1. The data for the above said variables is taken from the Prowess IQ Database provided by CMIE (Centre for Monitoring Indian Economy). Table 1 shows the variables description and formulas used in calculating the variable. A panel data was constructed for the sample NSE 500 Index ranging from 2012-2020 including all the variables of corporate governance and firm performance for the data from 348 companies yearly. The analysis is done on the software EViews 11 Student Version and the data is winsorized at 1% and 99% levels respectively.

Descriptive Statistics

This study incorporates the independent variables of total amount from Related Party Transactions (TARPT) (Agnihotri & Bhattacharya, 2019) and Total Income from Related Party Transactions (TIRPT) (Al-Dhamari et. al., 2018), and total expenditure from related party transactions (TERPT) (Al-Dhamari et. al., 2018). The variables that exert control in this study are Advertising Expenditure/ Total Sales (ATS) (Agnihotri & Bhattacharya, 2019), Log of Organizational Age (LOGOA) (Agnihotri & Bhattacharya, 2019), and Log of Market Capitalization (LOGMC). Total Assets was used as a moderating factor to examine the influence of RPTs on firm performance, with the aim of observing any moderating effects. This approach was employed in the studies conducted by Nodeh et al. (2016) and Wahab et al. (2011). The variable measured was TOBIN'S Q, as identified by Agnihotri and Bhattacharya in (2019). The Descriptive Statistics for the aforementioned variables are presented in Table 2.

Table 2: Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Standard Deviation	Skewness	Kurtosis	No. of Observations
TOBIN'S Q	7.533	3.656	105.101	0.311	13.100	4.666	29.129	2513
Log (MC)	24.811	24.649	29.787	19.264	1.483	0.295	3.210	2368
Log (TA)	23.508	24.180	30.087	11.513	3.188	-1.632	5.149	2399
ATS	1.881	0.746	18.141	0.001	2.957	2.932	13.158	1339
Log (OA)	1.432	1.462	2.072	0.000	0.357	-1.096	5.052	3076
LOGTARPT	22.404	22.491	28.432	14.914	2.094	-0.270	3.066	899
LOGTERPT	22.414	22.295	28.295	16.249	1.958	0.067	2.921	897
LOGTIRPT	22.282	22.393	27.951	12.899	2.287	-0.513	3.535	891
ACS	4.46	4.00	10.00	3.00	1.25	1.32	5.57	2484
LOGAUDITFEES	15.70	15.70	20.23	11.51	1.21	0.09	4.21	1175
LOGAUDITORFEES	15.92	15.91	20.23	11.51	1.16	0.12	4.23	1176
LOGNONAUDITFEES	14.09	14.18	18.60	11.51	1.21	0.00	3.10	916
NACM	5.02	4.00	14.00	3.00	1.59	2.40	10.70	2417

A total of 3076 observations were collected for Organizational Age. The ubiquity of data is a result of the lack of available data on Related Party Transactions. The data are made more symmetric by including a log of RPTs, Market Capitalization, and Organizational Age. RPTs and Market Capitalization are measured in millions, whereas Organizational Age is measured in years. Market capitalization varied from 8,641,224 million to 232.4 million INR. The range of organizational age spans from a maximum of 118 years to a minimum of 0 years, based on data collected in 2012. The advertising costs to sales ratio (ATS) and Tobin's Q are expressed as percentages.

Correlation Matrix

The Pearson correlation coefficient matrices for the factors are listed in Table 3. In Table 3, RPTs exhibit a very high degree of connection with market capitalization, and total expenses from RPTs also show a high degree of correlation with the total number of RPTs, with a significance value of 0.702. Similarly, there is a strong positive correlation (0.663) between the total income from RPTs and the total amount from RPTs. However, it is important to note that all the correlation values were within the acceptable range of 0.001-0.775 (Kumar & Singh, 2013). Nevertheless, Table 3 indicates that the other variables exhibited a minimal level of connection.

Table 3: Correlation Matrix: Degree of correlation, (T-Statistics), (Probability)

Correlation (T-Statistics) (Probability)	Tobin's Q	ROA	LOGTA	LOGOA	LOGMC	A/TS	LOG TARPT	LOG TERPT	LOG TIRPT
Tobin's Q	1.00 --- ---								
ROA	0.365 (8.771) (0.000) ***	1.00 --- ---							
LOGTA	0.076 (1.704) (0.089) *	0.034 (0.749) (0.454)	1.00 --- ---						
LOGOA	0.196 (4.464) (0.000) ***	0.034 (0.749) (0.454)	-0.104 (-2.341) (0.020) **	1.00 --- ---					
LOGMC	0.430 (10.643) (0.000) ***	0.500 (12.904) (0.000) ***	0.070 (1.564) (0.119)	0.017 (0.372) (0.710)	1.00 --- ---				
A/TS	0.313 (7.323) (0.000) ***	0.356 (8.513) (0.000) ***	-0.051 (-1.145) (0.253)	0.228 (5.219) (0.000) ***	0.288 (6.726) (0.000) ***	1.00 --- ---			
LOGTARPT	0.116 (2.620) (0.009) ***	0.092 (2.069) (0.039) **	0.118 (2.654) (0.008) ***	-0.028 (-0.621) (0.535)	0.424 (10.470) (0.000) ***	0.013 (0.284) (0.777)	1.00 --- ---		
LOGTERPT	0.232 (5.321) (0.000) ***	0.172 (3.899) (0.000) ***	0.094 (2.100) (0.036) **	0.060 (1.332) (0.183)	0.585 (16.127) (0.000) ***	0.108 (2.437) (0.015) **	0.702 (22.038) (0.000) ***	1.00 --- ---	
LOGTIRPT	0.020 (0.454) (0.650)	-0.037 (-0.833) (0.406)	0.162 (3.658) (0.000) ***	-0.096 (-2.151) (0.032) **	0.367 (8.801) (0.000) ***	-0.039 (-0.875) (0.382)	0.663 (19.786) (0.000) ***	0.599 (16.726) (0.000) ***	1.00 --- ---

Note: Table 3 shows the Pearson Correlation Coefficient Matrix for the variables under study. The (*), (**) and (***) shows the level of significance for 1%, 5% and 10% significance respectively.

Empirical Results

Ordinary Least Square (OLS) Regression Estimates of the impact of RPTs on firm performance

A regression of the following form and its nested versions are estimated and shown in Table 5:

$$\text{Tobin's } Q_{it} = \alpha + \beta_1 * \text{Related party transactions Component}_{it} + \beta_2 * \text{A/TS}_{it} + \beta_3 * \text{LogOA}_{it} + \beta_4 * \text{LogMC}_{it} + \varepsilon \text{ (Error term)} \text{-----(1)}$$

$$\text{Tobin's } Q_{it} = \alpha + \beta_1 * \text{LogTERPT}_{it} + \beta_2 * \text{LogTIRPT}_{it} + \beta_3 * \text{A/TS}_{it} + \beta_4 * \text{LogOA}_{it} + \beta_5 * \text{LogMC}_{it} + \varepsilon \text{ (Error term)} \text{-----(2)}$$

Where, related party transactions components includes total amount from RPTs, total income from RPTs and total expense from RPTs and moreover, i and t represents the cross-section and the time period, ε represents the error term and α and β represents the intercept and the coefficients of the variables taken under the study.

The results of Equations (1) and (2) are displayed in Table 4. The findings in Table 4 indicate that Models 1 and 2 show no significant influence of the total amount and expenses from party transactions on firm performance. However, Model 3 reveals that the total income from related party transactions has a significant negative impact on firm performance. Furthermore, the variables that exert control over firm performance, such as advertising expenditure as a percentage of total sales, organizational age, and market capitalization, have a statistically significant positive influence. Previous research (Ryngaert & Thomas, 2011; Wahab et. al., 2011) also note the detrimental effect of total income from related-party transactions (RPTs) on business performance. Furthermore, the findings align with the OECD principles of corporate governance, which classify related party transactions (RPTs) as abusive and detrimental to the listed entity's commercial prospects (OECD, 2009). Furthermore, when dividing the total amount from RPTs into total expenses and total income from RPTs in Model 5, the results remain consistent with previous findings. Specifically, total expenses from RPTs do not have a significant impact on firm performance, whereas total income from RPTs has a significant negative impact on firm performance.

Robustness Check

However, the Hausman test reveals a significant value of 0.019 (significant) in Model 4, indicating the suitability of employing the Fixed Effects Model (FEM) regression model. Applying the Finite Element Method (FEM) to Model 4, the findings indicate that the cumulative amount of Research and Development Projects (RPTs) has a statistically significant beneficial influence on business performance. These results align with those of Firman-syah and Ardi (2020). However, when the RPTs are further divided into income and expenses, and the Hausman test is applied, resulting in a significance value of 0.064 (indicating insignificance), it suggests the use of the Random Effects Model (REM) in Model 6. According to Model 6, total expenses from related party transactions (RPTs) did not have a significant effect on firm performance. However, the total income from RPTs had a negative and significant impact on firm performance, as noted in the previous results. Previous research (Gordon et al., 2004, Wahab et. al., 2011) found that the total income from related party transactions (RPTs) has a detrimental effect on company performance, suggesting that RPTs hinder the overall performance of the firm. According to clause 16 of Accounting Standard 18¹, if there is no disclosure of related party transactions (RPTs), it is assumed that the transactions in the financial statements of the companies are conducted on a fair and unbiased basis (where the parties involved are not connected and there is no conflict of interest). However, this assumption may not hold true when related party relationships exist. Related parties may engage in transactions in which they are unwilling to participate. The impediment to the firm's performance arises from the utilization of profits from related party transactions as collateral for personal interests in violation of the prohibition outlined in Section 188 of the Companies Act, 2013. Instances of collateral can also be seen in recent progress made by the Adani² and TATA³ groups. Shareholders and managers frequently exploit these collaterals for personal gain, resulting in imbalance in companies' balance sheets.

1 https://www.mca.gov.in/Ministry/notification/pdf/AS_18.pdf

2 <https://economictimes.indiatimes.com/news/company/corporate-trends/adani-tops-up-collateral-on-1-billion-loan-after-stock-rout/articleshow/97506124.cms>

3 <https://www.tatacapital.com/blog/home-loan/types-of-properties-which-can-be-given-as-collateral-for-a-loan/>

Table 4. Ordinary Least Square (OLS) Regression Estimates of independent variables with dependent variable Tobin's Q:

Dependent Variable Tobin's Q	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Variables	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)
LOGTARPT	-0.234 (-1.184) (0.237)			0.432 (1.767) (0.078) *		
LOGTERPT		-0.120 (-0.480) (0.631)			0.299 (1.020) (0.309)	0.358 (1.054) (0.292)
LOGTIRPT			-0.494 (-2.701) (0.007) ***		-0.604 (-2.818) (0.005) ***	-0.464 (-1.813) (0.070) *
A/TS	0.502 (4.044) (0.000) ***	0.516 (4.160) (0.000) ***	0.470 (3.759) (0.000) ***	0.593 (2.083) (0.038) **	0.475 (3.793) (0.000) ***	0.373 (2.422) (0.016) **
LOGOA	5.905 (3.685) (0.000) ***	5.973 (3.707) (0.000) ***	5.684 (3.524) (0.001) ***	-3.470 (-0.319) (0.750)	5.439 (3.334) (0.001) ***	4.661 (2.096) (0.037) **
LOGMC	2.892 (9.012) (0.000) ***	2.827 (7.893) (0.000) ***	3.072 (9.731) (0.000) ***	3.867 (5.131) (0.000) ***	2.897 (8.048) (0.000) ***	3.030 (7.364) (0.000) ***
Intercept	-69.987 (-9.134) (0.000) ***	-71.048 (-9.319) (0.000) ***	-68.430 (-8.801) (0.000) ***	-95.060 (-5.980) (0.000) ***	-67.938 (-8.703) (0.000) ***	-73.718 (-7.852) (0.000) ***
Adjusted R Squared(%)	24.393	24.215	25.299	41.204	25.284	16.265
Hausman Test	No	No	No	Yes (0.019)**	No	Yes (0.064)*
Fixed Effects Model	No	No	No	Yes	No	No
Random Effects Model	No	No	No	No	No	Yes
Number of Observations	514	512	508	514	506	506

Table 4 shows the OLS estimates of RPTs taken annually with respect to the dependent variable Tobin's Q. The (*), (**) and (***) shows the level of significance for 1%, 5% and 10% significance respectively.

Moderating effects of total assets on the impact of RPTs on the firm performance

Equation (3), (4) and (5) represents the moderating effects of the total assets on the impact of the RPTs on the firm performance and are as follows:

$$\text{Tobin's } Q_{it} = \alpha + \beta_1 * \text{LogTARPT}_{it} + \beta_2 * \text{LogTA}_{it} + \beta_3 * \text{LogTARPT}_{it} * \text{LogTA}_{it} + \beta_4 * \text{A/TS}_{it} + \beta_5 * \text{LogOA}_{it} + \beta_6 * \text{LogMC}_{it} + \varepsilon \text{ (Error term)} \text{-----(3)}$$

$$\text{Tobin's } Q_{it} = \alpha + \beta_1 * \text{LogTERPT}_{it} + \beta_2 * \text{LogTA}_{it} + \beta_3 * \text{LogTERPT}_{it} * \text{LogTA}_{it} + \beta_4 * \text{A/TS}_{it} + \beta_5 * \text{LogOA}_{it} + \beta_6 * \text{LogMC}_{it} + \varepsilon \text{ (Error term)} \text{-----(4)}$$

$$\text{Tobin's } Q_{it} = \alpha + \beta_1 * \text{LogTIRPT}_{it} + \beta_2 * \text{LogTA}_{it} + \beta_3 * \text{LogTIRPT}_{it} * \text{LogTA}_{it} + \beta_4 * \text{A/TS}_{it} + \beta_5 * \text{LogOA}_{it} + \beta_6 * \text{LogMC}_{it} + \varepsilon \text{ (Error term)} \text{-----(5)}$$

Table 5 displays the results of equations (3), (4), and (5). The findings in Model 1 indicate that the total assets do not attenuate the influence of the total amount from related party transactions (RPTs) on the firm's performance. Similarly, according to Models 2 and 3 in Table 5, total assets do not have a moderating effect on the impact of total income from related party transactions (RPTs) or the impact of total expenses from RPTs on firm performance. The influence of firm size (measured by total assets) on the relationship between related party transactions (RPTs) and firm performance was not statistically significant. Variables that exert control, such as advertising expenditure in relation to total sales, organizational age, and market capitalization, have a statistically significant positive influence on business performance.

Discussion

Two conflicting contributions related to RPTs have been extensively examined in the literature. One category involves the belief that RPTs give rise to conflicts of interest and encompasses agency issues, as examined in previous studies (Berle & Means, 1932; Jensen & Meckling, 1976; Gordon et. al., 2004). The second perspective on RPTs diverges from the first and asserts that RPTs are effective transactions that strategically meet a company's economic demands. The requirements encompass a profound level of abilities and competence among participants who may own confidential information or offer some type of pay. The conflict of interest position posits that related party transactions (RPTs) are detrimental to shareholders, whereas the efficient transaction view argues that RPTs are not harmful and may even be advantageous to shareholders (Gordon et. al., 2004). The survey suggests that approximately 80% of corporations provide information on at least one related party transaction (RPT), with an average of 3.9 disclosures per company. Furthermore, it is worth noting that both executive and non-executive board members are involved in approximately 47% of all transactions, emphasizing the significance of recognizing the distinct characteristics of these transactions. Nevertheless, the existence of Related Party Transactions (RPTs) and their correlation with CEO compensation indicates a deficient governance framework (Balsam et. al., 2017). Furthermore, companies that are limited by the million-dollar ceiling on the deductibility of executive remuneration (specifically, IRC Section 162(m)) may consider transferring some CEOs compensation to related party transactions (RPTs) as a strategy to optimize their tax deductions. Moreover, additional research corroborates that enterprises engaged in related-party transactions (RPT) exhibit notably reduced valuations

and slightly poorer returns compared to non-RPT firms (Kohlbeck & Mayhew, 2017).

Although RPTs are generally considered efficient transactions, our study found that they have a detrimental effect on firm performance. Specifically, the total income generated from RPTs has a significantly negative impact on firm performance.

Table 5: Moderating effects of Total Assets on the impact of RPTs on the firm performance:

Dependent Variable Tobin's Q	Model (1)	Model (2)	Model (3)
Variables	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)	Coefficient (T-Statistics) (Probability)
LOGTARPT	0.001 (0.228) (0.819)		
LOGTERPT		-1.047 (-0.620) (0.535)	
LOGTIRPT			0.001 (0.101) (0.920)
A/TS	0.504 (4.039) (0.000) ***	0.001 (4.169) (0.000) ***	0.470 (3.741) (0.000) ***
LOGOA	6.190 (3.830) (0.000) ***	6.376 (3.932) (0.000) ***	5.989 (3.695) (0.000) ***
LOGMC	2.871 (8.938) (0.000) ***	2.803 (7.824) (0.000) ***	3.061 (9.701) (0.000) ***
LOGTA	0.886 (0.572) (0.568)	-0.001 (-0.620) (0.535)	0.985 (0.749) (0.454)
LOGTARPT*LOGTA	-0.001 (-0.401) (0.688)		
LOGTERPT*LOGTA		0.038 (0.532) (0.595)	
LOGTIRPT*LOGTA			-0.001 (-0.519) (0.604)
Intercept	-90.013 (-2.391) (0.017) **	-55.809 (-1.418) (0.157)	-90.116 (-2.869) (0.004) ***
Adjusted R Squared	24.504	24.304	25.635
No of Observations	512	510	506

Table 5 shows the OLS estimates of RPTs and Audit Fees taken annually with respect to the dependent variable Tobin's Q. The (*), (**) and (***) shows the level of significance for 1%, 5% and 10% significance respectively.

These findings are consistent with those of previous studies on RPTs, which have highlighted the conflicts of interest and agency issues that arise from such transactions (Berle & Means, 1932; Meckling, 1976; Gordon et. al., 2004a). The substantial decrease in total income generated from related party transactions (RPTs) has a detrimental effect on the overall performance of the company, ultimately resulting in a conflict of interest between shareholders and managers and giving rise to difficulties related to agency costs. Furthermore, the empirical results indicate that total assets do not mitigate the influence of total quantity, expenses, and income from related party transactions (RPTs) on company performance.

Conclusion

There is a divergent perspective on the influence of RPTs on firm performance. Some studies argue that related party transactions (RPTs) give rise to conflicts of interest and involve issues of agency costs (Berle & Means, 1932; Jensen & Meckling, 1976; Gordon et. al., 2004). Conversely, other studies perceive RPTs as efficient transactions that effectively meet the economic needs of an organization. Rational demands may arise from several stakeholders, including shareholders, management, employees, auditors, and other stakeholders in the company. Furthermore, the existence of Related Party Transactions (RPTs) and the active involvement of stakeholders in these transactions indicates a deficient governance framework (Balsam et. al., 2017). Nevertheless, some studies indicate that effective corporate governance can alleviate the adverse effects of related party transactions (RPTs) on a company's performance. This has been demonstrated by the inclusion of auditor size as an external governance mechanism, which helps buffer the negative impact of RPTs (Wahab et. al., 2011).

The findings of our research align with those of the previous studies conducted by Wahab et. al. (2011), Berle and Means (1932), Jensen and Meckling (1976), Gordon et al. al. (2004). These studies conclude that the overall revenue generated via related party transactions (RPTs) has a statistically significant negative effect on business performance. This study examines the influence of Related Party Transactions (RPTs) and the components of the audit committee on the performance of the organization. Research has also examined the influence of ownership concentration and audit committees on related party transactions (RPTs) (Al-Dhamari et al., 2018; Agnihotri & Bhattacharya, 2019). Therefore, it is necessary to conduct a more thorough investigation of these areas in order to fully ascertain the characteristics of RPTs and their influence on the performance of the firm.

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